



SPECIFICATIONS FOR NEMA 3R ALUMINUM SCADA ENCLOSURES & CONTROL CABINETS

1. GENERAL

- 1.1. All Southern Enclosures are proudly Made in America in our ISO 9001:2008 registered facility. All enclosures satisfy the requirements for Made In America.
- 1.2. All are manufactured new materials and conform to all appropriate and relevant standards and all drawings approved by the customer.
- 1.3. Standard control cabinets are made to NEMA 3R standards and are UL 508 A Listed. The NEMA 3R rating means that the enclosures are designed and manufactured to provide a degree of protection of the equipment to be mounted inside against the ingress of foreign objects (falling dirt); to provide a degree of protection with respect to harmful effects on the equipment due to the ingress of water (rain, sleet, snow); and that will be undamaged by the external formation of ice on the enclosure.

2. Cabinet Construction

- 2.1. The cabinet and doors are constructed from .125" thick 5052-H32 marine grade aluminum with a mill finish.
- 2.2. All exterior cabinet and door seams are continuously welded using the gas tungsten (TIG) welding method.
- 2.3. All internal cabinet welds are done using gas metal arc MIG or TIG process.
- 2.4. All outside and inside edges shall be free of burrs.
- 2.5. If specified, all enclosures shall be furnished with two lifting eyes on either side of the enclosure with a minimum opening of 0.75". Each lifting eye is designed to support a load of 1,000 pounds and are secured by tamper-proof carriage bolts.
- 2.6. The top of the cabinet shall be sloped or otherwise formed to prevent the accumulation of water on the surface. The top shall extend over the door.
- 2.7. The door opening shall be double flanged and will open from the left unless otherwise specified.

3. Door

- 3.1. The door is secured shut with a three point latching system consisting of a dead bolt lock and aluminum pushrods with nylon rollers for the top and bottom strikers.
- 3.2. No external rivets are used to secure the lock or handle mechanism.
- 3.3. The door and hinges are designed to withstand a 100 pound per vertical foot of door height load applied vertically to the outer edge of the door when standing

open. There shall be no permanent deformation or impairment of any part of the door or cabinet body with the load is removed.

3.4. Locking Mechanism

3.4.1. The pushrods are made from 6061 T6 extruded aluminum flat bar with a cross section of .250 inches by .750 inches.

3.4.2. The cam shall be fabricated from stainless steel

3.4.3. The lock will be a #2 Corbin style deadbolt with 2 keys for each lock unless otherwise specified.

3.4.4. The handle will be formed from 3/4" stainless steel rod with a pad lock hasp.

3.4.5. The nylon rollers shall have a minimum diameter of .875"

3.5. The door will include a closed-cell neoprene gasket seal that is permanently bonded to the inside of each door.

3.6. The door will be hinged on the right using a full length stainless steel hinge not less than .075" thick and shall have a .250" diameter stainless steel hinge pin.

3.7. The hinge will be attached to the enclosure and door with 1/4-20 stainless steel carriage bolts.

3.8. The cabinet will have a three position door stop and rod to secure the door from wind at openings of 90°, 120°, and 180°.

4. Other Features & Options

4.1. There will be two unistruts rails on the back of the cabinet to attach optional back panels.

4.2. Back panels are available in aluminum, painted steel, or marine plywood.

4.3. Optional unistruts rails can be provided on the sides.

4.4. The cabinet shall be provided with an open bottom to be bolted to a mounting pad.

5. Optional Ventilation

5.1.1. Cabinet ventilation will be provided with louvered vents in the door with a removable and replaceable fiber glass filter to trap dust.

5.1.2. Exhaust air will be vented out on the underside of the overhang of the top above the door through slotted screen covered holes.

5.1.3. The enclosure will have a removable plenum for mounting an optional fan/thermostat assembly and an optional light.

5.1.4. If equipped with a light, there shall be a plunge switch that is opened when the door is opened to turn on the light.